

CLAIMS:

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1. A woodworking machine comprising:  
a support;  
a movable blade coupled to the support;  
a control system configured to detect a dangerous condition between a person and the blade; and

a brake mechanism triggerable by the control system to stop movement of the blade upon detection of contact by the control system;

(where the control system is configured to determine if the blade is moving, and configured not to trigger the brake mechanism if contact is detected when the blade is not moving.)

15 2. The woodworking machine of claim 1, where the blade is coupled to the support by a rotatable arbor, and where the control system is configured to determine if the blade is moving by detecting whether the arbor is rotating.

20 3. The woodworking machine of claim 1, where the control system includes a magnetic sensor adapted to determine if the blade is moving.

4. The woodworking machine of claim 3, where the magnetic sensor includes a Hall effect sensor.

5. The woodworking machine of claim 1, where the control system includes an electronic sensor adapted to determine if the blade is moving.

6. The woodworking machine of claim 5, where the electronic sensor includes a capacitive sensor.

092924-031301  
FOI# 4522550

7. The woodworking machine of claim 1, where the control system includes an optical sensor adapted to determine if the blade is moving.

5 8. A woodworking machine comprising:  
a working portion adapted to work when moving;  
a detection system adapted to detect a dangerous condition between a person and the working portion;  
a reaction system associated with the detection system to cause a predetermined action to take place relative to the working portion upon detection of the dangerous condition; and  
a motion detection system adapted to detect motion of the working portion and to disable the reaction system when the working portion is not moving.

15 9. The woodworking machine of claim 8, where the working portion is a spinning blade and where the motion detection system detects whether the blade is spinning.

10. The woodworking machine of claim 8, where the motion detection system detects the speed of the motion and considers the working portion to be not moving if the working portion is moving below a threshold speed.

11. The woodworking machine of claim 8, where the motion detection system includes a sensor.

12. The woodworking machine of claim 11, where the sensor is a Hall effect sensor.

13. The woodworking machine of claim 11, where the sensor is an electromagnetic field sensor.



092924-081301  
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(17). A woodworking machine comprising:

a working portion adapted to work when moving;

a motor to drive the working portion;

a detection system adapted to detect a dangerous condition between a person and

5 the working portion; and

a reaction system associated with the detection system to cause a predetermined action to take place relative to the working portion upon detection of the dangerous condition, where the reaction system causes the predetermined action only when the motor is running or during a defined period of time after the motor has been running.

(18). A woodworking machine comprising:

a cutting tool;

a detection system adapted to detect contact between a person and the cutter;

15 a brake system adapted to engage and stop the cutter when the detection system detects contact between the person and the cutter; and

a control system adapted to monitor the detection system and control actuation of the brake system, where the control system is adapted to trigger the brake system only if the cutter is moving.

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19. A woodworking machine comprising:

a cutting tool;

a motor to spin the cutting tool;

a detection system adapted to detect a dangerous condition between a person and

5 the cutting tool;

a brake system adapted to engage and stop the cutting tool when the detection system detects the dangerous condition between the person and the cutting tool; and

a control system adapted to monitor the detection system and control actuation of the brake system, where the control system is adapted to trigger the brake system if the dangerous condition is detected during coast-down of the cutting tool after the motor is turned off.

099294-081301  
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(20.) A woodworking machine comprising:

a working portion adapted to work when moving;

means for detecting a dangerous condition between a person and the working portion;

5 means for causing a predetermined action to take place relative to the working portion upon detection of the dangerous condition; and

means for detecting motion of the working portion and for disabling the means for causing a predetermined action to take place when the working portion is not moving.

090202-081301  
100120-1426250